Applicant: Association of State Wetland Managers

Project Title: Healthy Wetlands, Healthy Watersheds: Leveraging state wetland restoration and protection programs to improve watershed health

Potential Partners: State/Tribal wetland program managers and 401 Certification staff, academic community, federal agencies, nonprofit organizations and the business community

National Priority Area 1 Core Elements Framework: Voluntary Restoration & Protection, Regulatory Approaches, Monitoring and Assessment and Water Quality Standards

Key personnel:

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Geographic Location: Nationwide

Total Project Cost:	$260,000
EPA:	$195,000
ASWM:	$65,000

Abstract: The primary goal of this project is to identify ways to integrate state and tribal wetland programs with other federal, state and local water, habitat and floodplain programs in order to leverage the benefits of wetland protection and restoration to improve overall watershed health. Healthy wetlands are an integral component of healthy watersheds and provide many essential ecosystem services. Increasingly efforts to protect, restore, enhance and create wetlands are being employed to improve watershed health and to support climate change adaptation. However, there are substantial challenges to overcome. ASWM proposes to address these challenges by: 1) establishing an interdisciplinary workgroup; 2) identifying past and current projects that are using traditional and hybrid wetland restoration techniques to improve watershed health; 3) identifying ecological, regulatory and programmatic barriers to using traditional and hybrid wetland restoration techniques for watershed health; 4) identifying states that have developed integrated programs to address broader watershed management goals and developing a worksheet to identify common attributes; 5) collaborating with states, tribes and non-profits involved in watershed issues to identify solutions and develop scientifically sound recommendations; 6) cataloging findings and case studies in a white paper; and 7) sharing our findings with states, tribes, and others through webinars, fact sheets, workshops, social media and our website. ASWM expects the outcome will be an increase in state wetland program capacity to implement and support regional, state and local efforts to restore, enhance and create wetlands for the improvement of overall watershed health and increased resiliency to climate change.

PROJECT DESCRIPTION

(a) National Priority Areas: Core Elements Framework – Monitoring and Assessment, Voluntary Restoration and Protection, Regulatory Approaches and Water Quality Standards. This past summer, President Obama said that "no challenge poses a greater threat to our future and future generation than a change in climate." He went on to warn us that ours is "the first generation to feel the impact of climate change and the last generation that can do something about it." Water quality and quantity are at risk under every climate change scenario. Healthy wetlands provide numerous ecosystem services that are of critical importance not only to meet the traditional needs of both human and other natural communities, but to address the unique challenge of mitigating and adapting to climate change. Both traditional and innovative wetland protection and restoration programs - including hybrid systems using green infrastructure - will be needed to support overall watershed health and to provide increased flood and drought protection, provide clean drinking water, and maintain habitat under changing climatic conditions. To efficiently develop these projects, however, the various programs that manage wetlands, water quality, flood protection and habitat need to leverage the ecosystem services provided by natural resources such as wetlands. The pollutant filtering functions of wetlands integrated into Section 319, stormwater and TMDL program implementation can substantially reduce nonpoint source pollution while simultaneously providing other important functions such as flood attenuation or groundwater storage. The benefits of integrating these programs will provide strategic opportunities to maximize multiple benefits and program efficiencies.

Identifying solutions to the various challenges associated with watershed management will support improvements in state wetland programs, including each of the four core elements. For example, developing an integrated program that combines monitoring efforts for wetlands and surface waters can reduce long-term monitoring expenses, support more efficient monitoring and assessment programs, quantify how wetlands protect broader aquatic ecosystems, and spur the development of wetland water quality standards. Identifying regulatory frameworks that can support integration will benefit both compensatory and voluntary restoration and protection programs in support of Clean Water Act goals by increasing the efficiency within and among different permitting agencies, including CWA §401 certification, and increase the frequency that wetlands protection, restoration and creation are used to meet the objectives of other CWA programs. This project will also improve the ability of states and tribes to address the impacts of climate change by, a) providing case studies on projects that have improved watershed health through both traditional and hybrid wetland restoration and protection approaches; b) providing guidance for addressing climate change impacts through traditional and hybrid wetland restoration and protection projects; and c) providing a framework for greater communication and collaboration among wetland restoration/protection, water quality, habitat and climate preparedness programs. The overall outcome should be a net increase in wetland acres.

The primary goal of this project is to identify ways to integrate state and tribal wetland programs with other federal, state and local water, habitat and floodplain programs, in order to protect, restore and improve wetland acreage and quality while simultaneously improving overall watershed health.

Project Tasks:

The grant work plan will include the following steps to be taken to meet project goals:

1) **Establish and facilitate an interdisciplinary workgroup to provide expert advice and guidance ($18,000).**

The workgroup will consist of experts involved in the various aspects of watershed health, including state wetland and water program managers, federal agency representatives, professionals involved in wetland and surface water restoration, nonprofit watershed organizations, and academics. The workgroup will meet monthly via conference call to discuss project goals and findings.

2) **Create an inventory of successful projects that improved watershed health through traditional and hybrid wetland restoration and protection techniques ($27,000).**

A number of successful projects around the country utilized traditional wetland restoration and protection strategies as well as newer hybrid strategies to address water quality, water quantity and habitat needs. Examples include the efforts of the New York City Department of Environmental Protection to protect wetlands in the New York City Watershed to provide clean drinking water to almost half the population of New York State. In the Chesapeake Bay, wetlands were restored on former agricultural lands to improve the water quality of the Bay. In Tulsa, Oklahoma, a mix of structural and nonstructural approaches were used to reduce flooding and constructed wetlands have been used in many urban settings such as Lakeland, Florida to treat stormwater. Many of these efforts have produced other secondary benefits such as improved wildlife habitat and recreation. An inventory such as this can be used to inform future efforts.

3) **Identify ecological, regulatory and programmatic barriers to implementing nature based wetland solutions for watershed health, as well as the potential limitations of an integrated approach ($30,000).**

In order to increase the use and effectiveness of nature based solutions, such as wetland restoration to improve overall watershed health, it is imperative to identify the multiple considerations and factors involved in watershed restoration including programmatic, regulatory and ecological barriers that may impede implementation so that they can be effectively addressed. ASWM will research available case studies and reach out to state/tribal agencies (including both wetland and other Clean Water Act programs), non-profits and businesses that have spearheaded some of these innovative projects to identify the most pressing challenges and barriers. One of the biggest challenges to program integration for watershed health is competing regulatory frameworks that are often focused on singular project goals or designed for traditional gray infrastructure. ASWM will research existing regulatory frameworks to identify barriers to restoring natural wetlands and floodplains, and recommend ways to align regulations with the needs of projects that leverage natural and hybrid restoration strategies to provide multiple benefits. At the same time, the project will highlight potential limitations due to conflicting program needs; for example, use of a wetland area for stormwater filtration and storage may conflict with habitat needs of existing sensitive species. Recognizing competing needs can help to guide project planning in a mutually beneficial and permittable manner.

4) **Identify states that have developed integrated programs including wetlands to address broader watershed management goals and develop a worksheet to identify if there are attributes in common ($30,000).**

There are many studies that discuss the science behind improving restoration, enhancement and creation outcomes, but few that focus on the process of program integration and collaboration to enable the full use of wetland restoration and protection for watershed health. What are the attributes of a successful effort? There are recent and current efforts by some states to integrate various state water programs to improve program efficiency and provide a more holistic and comprehensive management strategy for watershed health, including wetland, surface water, stormwater and water quality programs. For example, the State of New Jersey has a model approach to program integration through its Statewide Nonpoint Source Pollution Management Program that includes watershed restoration, stormwater management, and water quality programs. The State of Vermont has recently completed a Lean government process to combine prioritization efforts and processes that address watershed health through the creation of its Watershed Management Division that includes wetlands, rivers, and lakes, and also administers stormwater and wastewater permitting. The State of Massachusetts created the Division of Ecological Restoration in 2009 by merging the Riverways and Wetlands Restoration Programs to prioritize ecosystems over habitats and coordinate restoration actions on a watershed scale. ASWM will perform outreach to states and tribes that have developed integrated programs (i.e. coordinating stormwater, wetland, and Section 319 programs) for addressing watershed health and identify common factors that may be integral to success. This analysis will be informed by ASWM's recent national state wetland program status and trends report and existing collaboration framework literature.

5) **Collaborate with states, tribes and other non-profits involved in watershed issues, wetland restoration and protection, wildlife habitat, floodplain management and climate change preparedness to identify solutions and develop professional, scientifically sound and implementable recommendations ($35,000).**

Once the barriers to natural and hybrid solutions for watershed restoration are identified, ASWM will work with states, tribes, federal agencies, academia, and other non-profits to identify solutions and develop best practices to encourage the use of wetland based strategies for improving watershed health and project outcomes. The best practices will address ecological, programmatic, policy and regulatory barriers and identify implementable actions that can be taken to overcome them.

6) **Catalogue findings and case studies in a white paper that discusses the challenges, benefits and limitations of leveraging nature based wetland solutions for watershed health, and describe best practices ($40,000).**

ASWM will develop a white paper that summarizes its findings from this project and provides a road map for future efforts to improve watershed health through the use of integrated programs and nature based wetland solutions.

7) **Share our findings through webinars, fact sheets, meetings, workshops, social media and our website ($80,000).**

Innovative approaches, proven successful strategies, case studies and other techniques that employ wetland restoration and other nature based solutions for projects to improve watershed health will be showcased through six webinars hosted by the Natural Floodplain Functions Alliance (NFFA) over the two year period of the grant. NFFA is an affiliation of nonprofit and private organizations, government agencies and individuals dedicated to the protection and preservation of the natural functions of floodplains, including coastal areas. NFFA was established to promote, protect, and enhance the protection, restoration, and management of

natural floodplain resources and ASWM is one of its founding members. These webinars will be available to anyone interested in learning more about using wetland restoration and protection to improve watershed health. As part of the project, ASWM will seek to broaden participation by other Clean Water Act programs (Section 319, stormwater, water quality standards, etc.) in NFFA. ASWM will also develop useful fact sheets that, along with the white paper and webinar recordings, will be posted to the ASWM website and available for free download. A section on program integration for watershed health will be developed for the ASWM website. ASWM will also provide a forum for discussion of effective program integration opportunities at the ASWM state/tribal/federal coordination meetings in 2017 and 2018. Travel assistance will be provided to encourage state/tribal wetland program managers with a demonstrated interest in improving wetland restoration success to attend this meeting. ASWM will further encourage both discussion and dissemination of information through our partners (the American Planning Association alone has 40,000 members) as well as digital and social media, including ASWM staff blogs, LinkedIn, Facebook, Twitter, on-line discussion forums, e-zines, newsletters and materials developed to communicate the benefits of wetland restoration and protection for watershed health to the general public.

(b) Environmental Results and Measuring Progress

i. **Stated objective/Link to EPA Strategic Plan:**

The proposed project supports EPA Goal 2: Protecting America's Waters, Objective 2.2: Protect and Restore Watersheds and Aquatic Ecosystems, by exploring how we can "promote robust planning that includes an assessment of green, sustainable alternatives" and "promoting green infrastructure and sustainable landscape management…by restor[ing] natural hydrologic systems and the health of aquatic ecosystems." This project will provide states and tribes and the nation at large with a comprehensive strategy for improving and achieving multiple watershed management goals through sustainable nature based wetland solutions that protect and restore natural hydrologic systems and the health of aquatic ecosystems. Program integration will result in efficiencies that provide multiple benefits at lower unit costs, benefiting local communities, including those that have been historically underserved. By integrating wetlands into strategies to achieve the objectives of other Clean Water Act programs, the project will simultaneously address pervasive problems such as nonpoint source pollution while improving, protecting, and restoring wetland acreage and quality with a larger goal of protecting and restoring broader aquatic systems.

ii. Results (Output): Products of this project will include the following outputs.

- A series of live webinars that will be recorded and posted on the ASWM website that provide further detail and insight into many of the barriers and solutions to developing integrated projects for protection and restoration of watershed health.
- A worksheet with project attributes that can be used in planning and decision-making to analyze and compare the potential benefits and impacts of future integration efforts.
- A section on the ASWM website with educational materials such as fact sheets, literature and links to materials that provide best management approaches and other information relevant to integrating wetland restoration and protection into watershed planning strategies.
- 2017 & 2018 State/Tribal/Federal Coordination Meeting sessions on effective integration.
- A white paper that summarizes the findings from this project and provides a road map to increase the use and effectiveness of nature based solutions to develop integrated projects that provide co-benefits for improved watershed health.

iii. Anticipated Environmental Improvement (Outcome):

This project will increase the capacity of state and tribal wetland management and related programs to successfully develop integrated programs to improve and/or restore watershed health and maximize multiple potential benefits. This will result in broader recognition by state, tribal, and federal government of the benefits of healthy wetlands in reaching multiple watershed goals and the adoption of new practices that include wetlands. It is anticipated that at a minimum, 10 states will adopt one or more of the identified best practices in the next three years and 20 more will do so by the end of five years. The public will benefit from the completion of more successful, cost-effective public and private wetland restoration, protection and hybrid green infrastructure projects, leading to improvements in aquatic and ecosystem resources. *Outcomes will be measured using feedback from state/tribal program managers, other government agencies and nonprofits to document:*

- Increased integration of wetland restoration, protection and hybrid green infrastructure into watershed planning, including Section 319, stormwater and other Clean Water Act programs
- Improved water quality measured by feedback from state/tribal Section 401 program managers.
- Improvements of other ecosystem services such as habitat, floodwater attenuation, and recreation
- Improved regulatory frameworks that support integrated agency projects providing co-benefits that in turn improve efficiencies in time and expense
- Improvements in the resilience of wetlands and other aquatic resources impacted by climate change

(c) Geographic Location: This project is national in scope. All states, active tribes, EPA regions, as well as other federal agencies and other partners will be invited to participate in the project.

(d) Milestone Schedule:

	1st quarter	2nd quarter	3rd quarter	4th quarter	5th quarter	6th quarter	7th quarter	8th quarter
Tasks	Establish workgroup. Identify barriers to nature based approaches.	Identify successful integrated efforts using traditional and hybrid restoration.	Develop worksheet of program attributes. Share with partners and stakeholders.	Develop recommendations. Hold discussions on solutions.	Begin drafting white paper. Develop Draft Strategy.	Continue working with partners to develop factsheets and white paper.	Finalize white paper with informal peer review process. Revise and Finalize Strategy.	Completion of final white paper, fact sheets and recorded webinars posted to web.
Workshop, webinar, and/or conference call schedule	Conference calls – workgroup and others to discuss project. Hold 1st NFFA webinar.	Conference calls – workgroup and others to discuss barriers and solutions. State/Tribal/Federal Wetland Meeting.	Hold 2nd NFFA webinar. Conference calls – workgroup and others to discuss worksheet.	Hold 3rd NFFA webinar. Conference calls – workgroup and others to discuss recommend-ations.	Hold 4th NFFA webinar. Conference calls – workgroup and others to discuss white paper outline.	State-Federal Wetland Meeting. Conference calls – workgroup and others to discuss fact sheets and white paper.	Hold 5th NFFA webinar. Conference calls – workgroup and others to discuss fact sheets and white paper.	Hold 6th NFFA webinar.
Transfer of results.	Materials posted to ASWM website. Distribute through Partners. Publicize new project.	Materials posted to ASWM website. Share information at State/Tribal/ Federal Meeting.	Material posted to ASWM website. Distribute through Partners. Publicize progress.	Materials posted to ASWM website. Distribute through Partners. Publicize progress.	Materials posted to ASWM website. Publicize strategy and seek review through digital media.	Materials posted to ASWM website. Share information at State/Tribal/ Federal Meeting. Publicize.	Draft white paper and other materials posted to ASWM website. Publicize. Distribute through Partners.	Final materials posted to ASWM website. Publicize. Distribute through Partners. Final report to EPA.

(e) Projects Partnerships: ASWM will invite an interdisciplinary group of federal/state/tribal/local government representatives, academics, nonprofit, and private organizations to serve on a workgroup. These include the Association of Clean Water Administrators, Association of State Floodplain Managers, the American Planning Association, Wetlands Watch, The Nature Conservancy, Water Environment Foundation, NOAA, FEMA, EPA, FWS, and the U.S. Army Corps of Engineers and individual states. (Letters of endorsement from some of these organizations are attached to this proposal).) In addition, all states and tribes as well as EPA regional staff will be invited to provide ideas, review documents and participate in the proposed webinars and meetings. ACWA will assist ASWM in identifying state contacts in state water programs such as 319, stormwater, etc. Tribes and tribal contacts will be identified with the assistance of the EPA regions. All 50 state agencies and 32 tribes currently participate in one or more of ASWM's projects by making inquiries, providing information about their activities and/or using information provided by ASWM to build program capacity.

(f) Transfer of Results: The project will transfer results to states, tribes, EPA Regions, project managers for government agencies, nonprofit organizations and other partners while the project is underway as well as when the project products are finalized. First, ASWM will invite state and tribal wetland managers to participate in the project. ASWM will also reach out at the national level to federal agencies, academic institutions, private consultants, sister state organizations (e.g., Association of State Drinking Water Administrators, Association of Fish and Wildlife Agencies), and others engaged in wetland and floodplain protection and restoration (e.g., Restore America's Estuaries, Center for Watershed Protection) to participate in the project. As described in the project tasks, the webinars and ASWM's 2017 and 2018 State/Tribal/Federal meetings will provide forums to share project products and findings. This will build support for addressing identified barriers and implementing recommendations. Secondly, materials will be developed for dissemination to state and tribal wetland programs for their use in reaching out to additional state, tribal and local partners. Based on past experience, it is expected that this strategic outreach at both the state and national level from the beginning of the project will have significant long term benefits that will begin to accrue before the project is completed. Ongoing access to the draft white paper and other materials as they are developed will be provided to the workgroup as well as the partners listed above who can share information through their networks. ASWM's state/tribal list will be used to provide the information to over 650 state and tribal wetland program staff nationally. Reports on progress will also be distributed to 3,000+ subscribers around the country through ASWM's on-line *Wetland Breaking News*. Others will gain access to technical guidance and associated materials as they are posted on ASWM web pages, which is currently linked to over 5,000 websites.

(g) Quality Insurance/Quality Control (QA/QC): This project does not generate, acquire or analyze any water quality data elements. Findings, interpretations and results included in project products will be subject to peer review. Peer review will include, but not be limited to, review by State and Tribal Wetland Program staff, EPA, other federal agency staff, and other partners. A complete QA/QC plan will be submitted, if required, with the full proposal.

(h) Invasive Species: n/a

BUDGET:

Overall Budget	EPA	ASWM	TOTAL
Total Labor (includes fringe)	$110,455	$42,695	$153,150
Labor - Professional	$90,067	$27,500	$117,567
Labor - Clerical	$20,388	$15,195	$35,583
Travel (employee)*	$5,812.50	$1,937.50	$7750
Equipment	0	0	0
Supplies	$187.50	$62.50	$250
Construction	0	0	0
Other	$42,750	$20,305	$63,055
Other – Rent	$7,500	$2,500	$10,000
Other - Internet/Telephone	$2,625	$875	$3,500
Other –Conference Facilities**	$15,000	$11,055	$26,055
Other -Scholarship Travel***	$17,625	$5,875	$23,500
Sub-Total	$159,205	$65,000	$224,205
Indirect 22.75% (salaries only)	$35,795		$35,795
TOTAL	$195,000	$65,000	$260,000

* 4 trips, ME to DC to discuss project with EPA staff, 4 ME to WV for state meeting in 2017 and 2018. ** State/Tribal/Federal Coordination Meetings 2017 and 2018 ***Travel for 30 participants (15 per year) to State/Federal meeting in 2017 and 2018

C. Detailed Budget Narrative: Overall, roughly 75% of the costs for this project will go to salaries (including ASWM's government-approved indirect rate, which is 100% salary), 9% to travel for states and tribes, and 16% for other expenses including conference facilities for the state/federal coordination meetings in 2017 and 2018, staff travel and regular operating expenses for the ASWM office. ASWM's nonfederal cost share of $65,000 will be comprised of $35,000 in match from foundations (McKnight Foundation and others), $5,000 from workshop registrations and $25,000 in-kind donated by volunteers and facilities. All in-kind donations are documented. The estimate of all cost-share is consistent with the amount of foundation, registration and in-kind donations we have received on an annual basis in recent years. There are no sub-awards or subcontracts planned for the activities described in the work plan. Salaries will be spent carrying out the tasks described in the previous section. ASWM has kept costs down by integrating the projects directly into the core services it provides to states, wetland professionals and other parties. ASWM's expenses such as rent, telephone, computer lease, etc. are prorated monthly based on the number of hours spent by staff on ASWM's various grants and contracts. If staff spends a great deal of time on one grant in a given month then the prorated office expenses will reflect that. If no time is spent on carrying out a grant, none of ASWM's monthly office expenses are billed to that grant. ASWM's bookkeeping is done entirely in QuickBooks and in no case does ASWM ever 'double bill' (i.e., bill more than one grant for the same hour of work or any other expense). ASWM has established policies fully compliant with government policies on the purchase of food and beverages associated with carrying out meetings. ASWM also has established procedures negotiating and tracking scholarship travel that ensure scholarship expenses stay within budget. ASWM has established long-term working relationships with the partners identified in the project description and many other members of the wetland community. By using its extensive established mechanisms for communications

(webpages, publications, conferences and newsletters), ASWM avoids the costs associated with creating new contact lists. ASWM's operating costs are lower than other organizations in part because ASWM's offices are located outside major metropolitan areas.

D. Programmatic Capability/Technical Experience/Qualifications

a. Staff Expertise/Qualifications: ASWM has a staff of eight including four professional staff, plus a webmaster, a communications specialist, a program assistant and a bookkeeper. Executive Director, Jeanne Christie and Senior Policy Analyst, Peg Bostwick are highly qualified wetland professionals, each with over twenty five years of experience working on wetland, water, and wildlife issues. Brenda Zollitsch and Marla Stelk are ASWM's policy analysts, each with nearly 20 years of experience working on policy and education-related programs and projects. Sharon Weaver has managed ASWM's website for over 15 years. Communications Specialist, Dawn Smith, renders and post-processes ASWM's recorded webinars. Laura Burchill, ASWM's Program Assistant, has extensive experience organizing workshops and providing logistical support for webinars, correspondence and other responsibilities. Collectively, ASWM staff form a cohesive team undertaking a wide variety of successful projects to build the capacity of state and tribal wetland programs to protect and conserve wetlands. ASWM's team has sufficient capacity to undertake this project if awarded as well as complete projects already funded. Marla Stelk will be the lead project manager and the entire staff will assist in carrying out the project tasks under her direction. Résumés for Jeanne, Peg, Marla and Brenda are attached. Please note that when additional staffing is needed, ASWM hires limited term employees for specific projects. ASWM has recently doubled its office space in anticipation of future growth.

b. Organizational Experience: ASWM was established in 1983 to provide a forum for communication and problem-solving among states. ASWM has been working with the states, federal agencies, and other partners on a wide variety of wetland issues for over 30 years. States and other organizations look to ASWM for leadership in matters of national wetland policy, applying sound science, interpreting and implementing the Clean Water Act and related programs, and restoring aquatic systems. They do so because ASWM has a strong reputation for providing accurate, useful and timely information. ASWM webpages are currently linked to over 5,000 websites. Currently, over 650 state wetland managers and tribal staff receive regular communications via e-mail and are invited to participate in ASWM's conference calls, webinars and workshops, and 3,000+ individuals receive ASWM's monthly e-zine Wetland Breaking News. There are 50 states, 32 tribes and 10 EPA Regions participating in ongoing ASWM projects as well as local governments, academics, other federal agencies, nonprofit organizations and members of the business sector. ASWM's various e-mail lists reach over 10,000 individuals. ASWM has in-depth knowledge about state wetland programs that it shares with states, tribes and many other partners. In recent years, ASWM has convened states, tribes, federal agencies and other partners to work on improving wetland mapping, identifying barriers to wetland restoration success, developing 401 certification programs, developing state and tribal Wetland Program Plans, summarizing state wetland climate change plans, developing information to support development of water quality standards for wetlands by states and tribes, and clarifying Section 404 assumption requirements. It recently completed a state status and trends report summarizing wetland programs in 50 states and providing a comparative analysis of those programs. These activities foster peer-to-peer sharing and state wetland program capacity building.

E. Past Performance: ASWM is committed to designing and implementing useful, high quality projects that lead to meaningful, positive changes in the conservation, protection and restoration of the Nation's wetlands. ASWM carefully documents and develops a tracking plan for performance requirements for each new grant. Financial and quarterly reports are submitted on time. Cost share dollars are allocated, expended and tracked as part of project implementation. In addition ASWM has regular contact with each EPA project manager. Grants are closed out with all materials submitted, including the final technical report within the 90 days following the end of the project period as provided under the grant. In the majority of ASWM's projects, outcomes continue to occur long after a grant ends. Below are examples showing outcomes of ASWM's two most recent grants with EPA.

Outcomes from EPA WD-83541601-1 A Wetland Restoration Work Group was formed early in this project and made major contributions to the completion of the project. The ASWM website now has an annotated bibliography of wetland restoration methods and approaches that was posted on ASWM wetland restoration webpages (also developed for this project). A report titled *Ecosystem Service Valuation for Wetland Restoration: What It Is, How To Do It, and Best Practice Recommendations* was written, reviewed and presented at two events. A draft white paper titled *Wetland Restoration: Contemporary Issues & Lessons Learned* was developed with the input of states, tribes, federal agencies, and restoration partners during the project. Wetland restoration sessions were held at the 2014 and 2015 ASWM state/tribal/federal meetings. Eleven webinars were hosted in a new *Improving Wetland Restoration Success* webinar series to tackle some of the biggest restoration challenges and share insights/lessons learned from experts in the field. A total of 1,657 people attended the webinar series (each webinar averaged 300-400 participants). Outcomes included knowledge increases about state wetland restoration programs, wetland restoration science and ecosystem services provided by wetlands and ability to develop economic valuations of wetland benefits. Feedback received shows that increased knowledge put to work has improved wetland restoration practices which will result in an improvement in wetlands quality and quantity across the US.

Outcomes from EPA WD-83542601: ASWM's project: 1) \developed *50 individual state wetland program summaries* (~800 pages) detailing 48 areas of program information; 2) created a comparative analysis of state programs; published in a 90-page *Status and Trends Report on State Wetland Programs in the United States*; 3) developed a new Program Development Continuum measure to assess Core Element program development; and 4) created new online resources, including an interactive national map. The project resulted in dozens of presentations and both live and archived webinars, as well as feature articles and blog posts. Through this project, ASWM increased state/tribal knowledge about state wetland programs, practices, models, tools and lessons learned. Project products facilitate direct access to tools and technical support. ASWM's report also identified critical information about climate change work and a range of state-level integration opportunities well-suited to be developed into model integration best practices. States indicate they will be using these products to build wetland program capacity, incl. for *developing wetland Monitoring & Assessment programs: AL, IA, GA, MO, OH, OR, TN, UT, WA, WV*; *developing one or more wetland water quality standards*: IL, ME, MO, NH, NJ, NM, OK, PA, TN, VT; *working towards the development of state wetland restoration programs:* KY and VT and improving their regulatory capacity: *48 states indicated they are planning changes*.

ADDITIONAL MATERIALS ATTACHED:

Resumes for Jeanne Christie, Peg Bostwick, Marla Stelk and Brenda Zollitsch.

LETTERS OF SUPPORT FROM:

- Julia Anastasio, Executive Director & General Counsel, Association of Clean Water Administrators
- Chad Berginnis, CFM, Executive Director, Association of State Floodplain Managers
- Tim Purinton, Director, Division of Ecological Restoration, Massachusetts Department of Fish and Game
- Jim Schwab, FAICP, Manager, Hazards Planning Center, American Planning Association